

Department of Health Research Ministry of Health and Family Welfare, Government of India



Standard Treatment Workflow (STW)

APPENDICITIS ICD-10-K35

	ACUTE APPENDICITIS (Early presentation within 72 hours)			
 PRESENTATION OF APPENDICITIS MAY BE AS 1) Acute appendicitis - early / delayed 2) Appendicular mass 3) Recurrent appendicitis 	 SYMPTOMS OF ACUTE APPENDICITIS Pain Periumbilical or epigastric colic (in nonobstructive type the pain may start at RIF) Shifting of pain from periumbilical region or begins from this site Nausea/ vomiting Pyrexia (usually absent in first 6 hours) Loss of appetite NB: Pain always precedes vomiting (Murphy). Onset of symptom is more acute and abrupt in acute obstructive appendicitis If the patient has rigor and high fever within 24hrs of the onset of pain, appendicitis is most unlikely 	 SIGNS OF ACUTE APPENDICITIS Pointing sign – The patient points with the index finger the site of maximum pain at region of Mc Burney's point Cough test – C/O pain at right iliac fossa on coughing Tenderness at Mc Burney's point Muscle guard at right iliac fossa (RIF) Rovsing's sign – pain at RIF with sudden thurst of palpation at left flank of abdomen Rebound tenderness – pain at RIF with sudden withdrawal of the maintained pressure with hand Generalised rigidity is a sign of generalized peritonitis; it is less marked if obese, emaciated, extremes of age NB: When appendix is retrocaecal the signs of appendicitis may be masked Inflamed pelvic type of appendix in contact with urinary bladder or rectum may produce features of cystitis or tenesmus Post ileal appendix may cause diarrhoea and marked retching. With progress of pregnancy, appendicular pain may be up at right flank of abdomen as the caecum and appendix are pushed up Females with inflammatory pelvic organ disease e.g, salpingitis may have history of dysmenorrhoea and purulent vaginal discharge 		
 FACTORS FOR PREPONDENCE COMPLICATIONS 1. Extremes of age 2. Immunosuppression 3. Diabetes Mellitus 4. Faecolith obstruction of appendicular lumen 5. Previous abdominal surgery 	INVESTIGATIONS The diagnosis of acute appendicit essentially clinical. The investigat 1. Full blood count – usually show leucocytosis with raised polyme 2.Urinalysis to exclude urinary tra 3.Ultrasonography – often very he confirm diagnosis and identify periappendicular collection of a abscess 4.Plain X-ray abdomen – to rule of calculus or peptic perforation 5.CT scan of abdomen – useful in situation of uncertain diagnosis appendicitis	 appendicitis is appendicectomy except in special situations where surgical facility could not be provided or the patient presented late with appendicular mass. The essential preoperative investigations including routine blood sugar, urea, creatinine, Hb%, chest X-ray and ECG in all elderly patients. Intravenous fluid and broad-spectrum antibiotics to be started on admission Acute appendicitis should be recognized early before it is allowed to reach the stage of peritonitis or an abscess formation. Clinical state 		

APPENDICECTOMY MAY BE

 Conventional open surgery
 Laparoscopic

CHECKLIST FOR AN UNWELL PATIENT (HAVING FEVER, ANOREXIA ETC) FOLLOWING APPENDICECTOMY

- 1) Examine the operation wound for induration, collection or purulent discharge
- 2) Consider residual abscess (pelvis, RIF or Hepatorenal pouch of Morrison
- 3) Examine iungs for pneumonia or collapse
- 4) Thrombophlebitis

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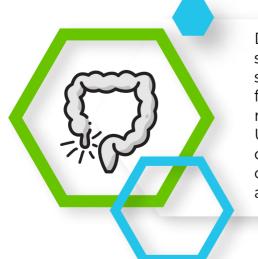
APPENDICULAR MASS

OCHSNER-SHERREN CONSERVATIVE TREATMENT

(In the presence of appendicular mass, surgery may cause more bleeding, injury to caecum and ileum; faecal fistula may develop). Conservative treatment includes • IV fluid:

- Broad spectrum antibiotics
- Vitamins
- No purgative
- · No Enema

NB: OPERATION FOR APPENDICULAR MASS IF INDICATED SHOULD ALWAYS BE DONE AT HIGHER CENTRE AND PERFORMED BY AN EXPERIENCED SURGEON.



RECURRENT APPENDICITIS

SIGNS OF IMPROVEMENT IN

PRESENCE OF

APPENDICULAR MASS

Patient feeling better

Tenderness diminishes

Appetite improves

• Reduced pain

CRITERIA FOR STOPPING THE

CONSERVATIVE TREATMENT

Increasing intensity and spreading

· Vomiting or copious gastric aspirate

• A rising pulse and body

abdominal tenderness

Increasing size of the mass

temperature

Diagnosis is mainly clinical. Usually a past history suggestive of acute appendicitis is present and latter shows a history of recurrent acute pain at RIF or it may follow a chronic course. Signs of indigestion, flatulence may be present. Mc Burney's point tender. Ultrasonography often compliment the clinical diagnosis. CT-Scan and barium follow through X-ray are often required to confirm the diagnosis. Treatment is appendicectomy - open or laparoscopic

KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of DHR for more information: (**stw.icmr.org.in**) for more information. ©Department of Health Research, Ministry of Health & Family Welfare, Government of India.